LICENSEE EVENT REPORT

77-040/03L-0

CONTROL BLOCK: [ ] (1–6) (PLEASE PRINT ALL REQUIRED INFORMATION)

LICENSEE NAME	LICENSE NUMBER	LICENSE TYPE	EVENT TYPE
NJOCP J (7–14)	00-000-00 (15–25)	4 J 1 1 1 (26–30)	0 1 (31–32)

CATEGORY	REPORT TYPE	REPORT SOURCE	DOCKET NUMBER	EVENT DATE	REPORT DATE
CONT (7–8)	(57–58)	L (59)	L (60)	050-02190 (61–66)	042377 (69–74)	05207 (75–)

EVENT DESCRIPTION

At 9:00 p.m. on Saturday, April 23, 1977, while performing local leak rate tests on the main steam isolation valves, it was discovered that outer MSIV NS04B would not hold pressure when attempts were made to pressurize the volume between it and inner MSIV NS03B. The failure of NS04B to hold pressure was indicative of a loss of capability to maintain leakage from the containment system within the limits

(SEE BELOW)

SYSTEM CODE	CAUSE CODE	COMPONENT CODE	MFGR COMPONENT SUPPLIER	COMPONENT MANUFACTURER	VIOLATION
CD (7–9, 10)	E (11)	VALVEX (12–17)	N (43)	A585 (44–47)	Y (48)

CAUSE DESCRIPTION

MSIV NS04B is presently being disassembled and inspected. The inspection to date has revealed tight cracks located around the entire seat of the main valve along with some minor degradation of the pilot valve seat. The inspection is being continued

(CONTINUED NEXT PAGE)

FACILITY STATUS	% POWER	OTHER STATUS	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION
H (9)	000 (10–12)	NA (13–44)	B (45)	Local Leak Rate Test (46)

FORM OF ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY	LOCATION OF RELEASE
Z (9)	Z (10)	NA (11–44)	NA (45)

PERSONNEL EXPOSURES

NUMBER	TYPE	DESCRIPTION
000 (7–9, 11)	Z (12)	NA (13)

PERSONNEL INJURIES

NUMBER	DESCRIPTION
000 (7–9, 11)	NA (12)

Probable Consequences

NA

LOSS OR DAMAGE TO FACILITY

TYPE	DESCRIPTION
Z (7–9)	NA (10)

PUBLICITY

NA

ADDITIONAL FACTORS - EVENT DESCRIPTION - continued

specified in paragraph 4.5.F.1.D of the Technical Specifications. (RO 50-219/77-10-3L)

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CAUSE DESCRIPTION - continued

to determine if additional causes for the valve leakage can be found.

CORRECTIVE ACTION

Preparations are being made to replace the seat in the body of the main valve and to refurbish the seat in the pilot valve. Additional maintenance will be performed on the valve as required. A retest will be performed prior to reactor startup.

FAILURE DATA

MSIV (NS04B)
24" Air Operated Globe Valve
Manufactured by Atwood Morrill Company
Drawing No. 20451-H

Donald A. Ross, Manager-Generating Stations-Nuclear 201-539-6111

OYSTER CREEK NUCLEAR GENERATING STATION
Forked River, New Jersey 08731

Licensee Event Report
Reportable Occurrence No. 50-219/77-10-3L

Report Date

May 20, 1977

Occurrence Date

April 23, 1977

Identification of Occurrence

Violation of Technical Specification 4.5.F.1.D. Failure of a main steam isolation valve to maintain leakage from the containment system within specified limits. This event is considered to be a 30-day reportable occurrence as defined in the Technical Specifications, paragraph 6.9.2.b.4.

Conditions Prior to Occurrence

Reactor subcritical in the Refuel mode.

Description of Occurrence

On Saturday, April 23, 1977, at 2100, a local leak rate test was performed on the main steam isolation valves (MSIV) in accordance with plant procedures. While preparing to leak test MSIV NS03B (inner valve) with the reactor pressurized to 35 psig, an attempt was made to drain the volume between the inner and outer valves by pressurizing the volume to 10 psig and then venting the volume to a hub drain. The first attempt to pressurize the volume to 10 psig was unsuccessful and it was postulated that the cause of the problem was the failure of the outer valve (NS04B) to seat properly. The outer valve was then cycled and repeated attempts were made to pressurize the volume, all unsuccessfully. Further testing of the inner and outer valves was halted pending further investigation of the problem.

Apparent Cause of Occurrence

MSIV NS04B is presently being disassembled and inspected in an effort to identify the cause(s) of the excessive leakage. The preliminary results of this inspection has revealed that tight cracks were located around the entire seat of the valve body along with some minor degradation of the pilot valve seat. The inspection is being continued to determine if additional causes were responsible for the leakage.

Analysis of Occurrence

The MSIV(s) provide a dual purpose: (1) Reactor coolant isolation in the case of a main steam line break outside the drywell; and (2) Primary containment isolation should a pipe break occur inside the containment. The main steam isolation valves are redundant in that one valve in each steam line will provide the necessary isolation function.

The safety significance of this event is considered to be a loss of system redundancy since valve NS03B was functional. Although the leak tightness of NS03B cannot be conclusively determined until repairs are effected to NS04B, it is anticipated that NS03B is within allowable leakage limits.

Corrective Action

Based on the results of the inspection performed to date, preparations are being made to replace the valve's main body seat and to refurbish the pilot valve seat. Additional maintenance, as required, will be performed on the valve followed by a retest prior to reactor startup.

Failure Data

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